System Quality Consultants, Inc.

TECHNICAL STATUS REPORT

FOR THE PERIOD ENDING 31 Dec 94

Executive Summary

During this month's reporting period, SQC continued to provide project management to the Backgrounds Data Center (BDC). In addition to the Project Manager, SQC provided management of the Operations, Software Development, Project Support, and Specification and Test efforts. The most significant events that occurred are the continuation of MSX Data System Tests and the installation of a new pipeline software build.

Task 1--Project Management Support

Abstract

This task requires SQC to provide risk management analysis, software cost estimates, procurement strategies, program office organization and staff planning, schedule and resource allocation planning, program planning and documentation, project control system accounting, and training.

Work Performed During DEC 94

Provided Specification & Test (S&T), Software Development, Operations, and Project Support Office input to MSX project GANTT and PERT charts for scheduling and resource allocation planning.

Provided S&T, Software Development, Operations and Project Support Office input to the monthly MSX and Core status reports.

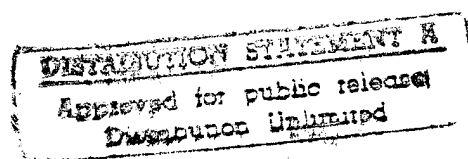Developed new GANTT chart format and produced GANTT schedules for the BDC.

Revised data bases to provide relevant metric information.

Anticipated Activities During JAN 95

Continue the production of GANTT schedules and PERT charts.

Continue to provide input for FY95 budget, project planning, and monthly status reports.

Task 2--Management Plan Development

Abstract

This task requires SQC to develop and present program management plans, software development plans, configuration management plans, quality assurance plans, test plans, and independent verification and validation plans for use on Naval Research Laboratory's (NRL) programs.

Work Performed During DEC 94

Chaired ELEVEN (11) Configuration Control Boards (CCB) which processed NINETY-ONE (91) Problem Report/Change Request (PR/CR) actions. This included: TWELVE (12) new PR/CRs, eleven (11) analyzes, fourteen (14) implementations, seven (7) validation, fourteen (14) Quality Evaluations, and thirty-three (33) closures.

Continued work on revising the Configuration Management Plan (CMP).

Nine (9) software PR/CRs and six (6) DCRs were analyzed; ten (10) PR/CR and four (4) DCR fixes were implemented; and five (5) DCRs were closed during this reporting period.

Managed SW development activities including that for MSX pipeline processing and for the Visual Interface for Space and Terrestrial Analysis (VISTA). MSX Pipeline software Build 4.1.0 was installed on 20 Dec which greatly improved system throughput.

Anticipated Activities During JAN 95

Chair CCBs as required.

Continue work on the BDC CMP.

Produce the first draft of the BDC User's Guide.

Manage the delivery and installation of Build 4.1.1 of the BDC/MSX Pipeline Software.

Continue to manage SW development activities.

Task 3--Detailed Process Development

Abstract

This task requires SQC to develop and present processes (process flow diagrams, step-by-step procedures, quality assurance procedures, and quality checklists) to be used on NRL programs.

Work Performed During DEC 94

Managed the effort to upgrade all of the Operations Procedures. Eight (8) procedures were written and/or revised during this reporting period.

Updated six (6) OCM procedures with review comments and sent them out for a final BDC review.

Managed the effort to verify Operational process compliance through the use of Quality Assurance audits of procedures. Procedures were redlined and changes were incorporated into the procedures.

Anticipated Activities During JAN 95

Continue upgrading the Operational Procedures.

Continue Operational procedure QA audits.

Continue upgrading the Operational Configuration Management Procedures.

Manage the effort to update OCM and Archive Library procedures.

Task 4--Requirements Development

Abstract

This task requires SQC to meet with NRL scientists, users, customers, and others identified by the Contracting Officer's Technical Representative to document project requirements. SQC is required to document requirements in Type A and Type B specifications. The requirements are to provide program managers with capability for product assessment through analysis and testing of performance parameters. SQC is to determine performance requirements and demonstrate satisfaction through testing.

Work Performed During DEC 94

Received additional PLDAF comments for the BDC to PLDAF ICD and incorporated them into draft version 0.0.7. Distributed this version for internal BDC review and posted it to SCIES for DM and PLDAF to download for review.

Anticipated Activities During JAN 95

Attend a meeting with DM, the BDC, MDDC, and EMDAC to work on the BDC to EMDAC ICD due to the decreased role of MDDC and the increased role of the BDC for non-dedicated target Data Collection Events. Continue work on the BDC to EMDAC ICD and revise the BDC to MDDC ICD.

SEU DAT and DM approval signatures for the BDC to SEU DAT ICD are expected during the next reporting period.

Attend a meeting between DM, SP3 DPC and the BDC to discuss changes to the SP3 DPC to the BDC ICD.

Task 5--Documentation Review

Abstract

This task requires SQC to review documents prepared by NRL contractors in a variety of activities for compliance with relevant established standards, development plans, and management plans and to provide comments and recommendations to NRL. The task also requires SQC to perform technical reviews and audits (formal design reviews, informal reviews, and administrative reviews) on NRL's contractor developed hardware, software, facilities, and management documents.

Work Performed During DEC 94

Reviewed seven draft OCM operational procedures providing change control and PR/CR processing instruction.

Reviewed 12 OCM and Archive Library procedures.

Signed five (5) Archive Library procedures and one (1) OCM procedure.

Continued managing the preparation, review, and release of test cases and procedures for the MSX FOC testing activities.

Anticipated Activities During JAN 95

Review and sign OCM and Archive Library procedures.

Review other documents as required.

Continue updates to the STD. Provide S&T team support to the review of BDC documents and procedures and DM test procedures.

Continue to manage SW documentation efforts.

Task 6--Technical Information Preparation and Presentation

Abstract

This task requires SQC to prepare and provide formal and informal state-of-the-art techniques presentations in Project and Process Management disciplines.

Work Performed During DEC 94

Prepared and distributed CCB Minutes.

Prepared and distributed Status Reports on DM PRs, Priority 2 PR/CRs and Priority 3 PR/CRs.

Revised data bases to provide additional status reports.

Anticipated Activities During JAN 95

Prepare and distribute CCB Minutes.

Prepare and distribute Status Reports on DM PRs, Priority 2 PR/CRs and Priority 3 PR/CRs.

Prepare data for presentation and attend DM's TIM at JHU/APL.

Host DM, MDDC, SP3 DPC, and EM DAC at the BDC for meetings to discuss and document Interface Control Document (ICD) requirements.

Task 7--Formal Test Case and Test Procedure Development and Execution

Abstract

This task requires SQC to develop and execute detailed test cases and procedures designed to validate designated developed products prior to their being declared operational. The testing must demonstrate that all system elements satisfy NRL requirements. SQC must also verify that testing spans the overall acquisition cycle.

Work Performed During DEC 94

Managed and provided guidance for the preparation of formal test cases, test case descriptions, and test procedures. During this reporting period, review and update of test cases and procedures which were executed during IOC testing were reviewed for currency and correctness, and updated in order to re-execute them on the new software build installed in the pipeline system. Completed four test case/procedure revisions.

During the reporting period, SQC continued the management of and coordinated the planning and preparation activities necessary to successfully execute Data System Tests (DST). These activities included processing and distributing Level 1A and DPC test data products to complete execution of DST 3.5 and to continue execution of DST 5.4a. These tasks included test data receipt, monitoring the processing of the test data on the pipeline system, tracking the status of Operator Discrepancy Forms (ODF), PR/CRs and Data Management (DM) Problem Reports (PR), monitoring approved revisions to the MSX pipeline software (a new build was installed on the pipeline system during this reporting period) and operating procedures, the retesting effort, and closing all open DST issues. Worked with Operations and Software Development to find solutions to problems encountered. Communicated with MSX DM on PR resolution and other DST related issues. Reported to DM the progress and daily status of DSTs 3.5 and 5.4a.

The Specification & Test team, under SQC's management, acted as the central repository for problem reporting and resolution. This included coordination of problem resolution both internally at the BDC and externally among the other participating MSX data organizations. (4.7, 4.7.2).

Anticipated Activities During JAN 95

Coordinate BDC activities required to complete MSX DST 5.4a.

Continue managing the FOC testing activities.